

ABSTRACT

Thermodynamic energy methods and systems that provides all electrical energy and heat needs of a single residential house, commercial business or office building. The system is small enough to be stored inside the house or building. The system can

5 generate excess electrical energy which can be sold over a power grid and allow for the house owner, building owner or energy provider (utility company) to provide income. The method and system can have combined energy conversion efficiency up to approximately 97%. Components can include amorphous materials, and the mono-tube steam generator boiler which is explosion proof when punctured, and only emits a puff of

10 steam when punctured. The tubes can be built to pressure vessel code. The invention can use steam generators to power A/C units, domestic hot water, hot water air space heaters, other loads such as pools and spas and underground piping to eliminate ice and snow. Additionally, the invention can be used to power vehicles such as cars, and the like. Other embodiments can use thermodynamic energy methods and systems that provides

15 electrical energy and heat needs of a residence, commercial business, or office building, that include supertropically expanding ammonia vapor against a vacuum, as generated by chemisorption, in order to convert moderate amounts of heat into mechanical energy at high efficiencies. A supertropic package system can include a source of ammonia/water, a thermal generator for heating the source of ammonia/water and generating ammonia

20 gas, a positive displacement device for expanding the gas, and generating electricity from a power source driven by the expander.